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# Office of Space Science Solar System Exploration Division

## Archiving Data with the Planetary Data System

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# Discovery Pre-Proposal Conference

## Archiving Data with the Planetary Data System

### Topics

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- OSS Science Data Management Policies
- Overview of Planetary Data System
- Planetary Data System Organization
- Planetary Data System Services
- Considerations for Proposers



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## Archiving Data with the Planetary Data System

### OSS Science Data Management Policies

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- **Key Objectives**

- Preserve and utilize space science data as a National resource
- “Open” Data: data ultimately belongs to science community and public
- Appropriate and balanced allocation of resources for data issues through mission life cycle

- **Requirements**

- Projects develop a Project Data Management Plan which is reviewed as part of Non-advocate Review
- **Timely** delivery of science data products to archives for open availability
- Data Analysis Program (DAP) must utilize data residing in the PDS



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## Archiving Data with the Planetary Data System

### Overview of the Planetary Data System

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- PDS is the official planetary science data archive for the NASA Office of Space Science (OSS) Solar System Exploration (SSE) Division
- PDS is chartered to ensure that SSE planetary data are archived and available to the scientific community
- PDS is a distributed system designed to optimize scientific oversight in the archiving process
- The PDS has been in existence in its present form for ~12 years
  - evolved from an offline media archive to a distributed online system



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## Archiving Data with the Planetary Data System

### Planetary Data System Organization

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- **Central Node (JPL)** - Provides Program Management, System Engineering, standards development/maintenance, top-level catalog
- **Discipline Nodes** - Discipline Scientists provide expertise to interface with Flight Program Scientists and Central Node. Current Discipline Nodes are:
  - Atmospheres (NMSU)
  - Geosciences (Washington U)
  - Imaging (USGS Flagstaff/JPL)
  - Navigation Ancillary Information Facility - NAIF (JPL)
  - Planetary Plasma Interactions (UCLA)
  - Radio Science (Stanford U)
  - Rings (NASA Ames)
  - Small Bodies (U of Maryland)
- *Results of recent DN NRA may yield some institutional changes*



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## Archiving Data with the Planetary Data System

### Planetary Data System Services

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- PDS establishes and maintains standards for high quality data archives
- PDS works with missions to create complete data sets (calibrations, documentation, metadata)
  - PDS develops and maintains a suite of tools to help data producers create and validate archive-quality data products
  - PDS personnel can be funded by the mission to perform mission archiving tasks
- PDS provides expert assistance to the scientists who use the archives
- PDS ensures the viability of planetary data that might otherwise be lost



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## Archiving Data with the Planetary Data System

### Considerations for Proposers

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- Early involvement/interface with PDS is critical to simplify the required product delivery/pipeline
- Lead PDS Discipline Node scientists guide use of PDS standards by Projects for each data set
- Delivery of data to PDS must occur within six months of collection, allowing an exclusive data use period by Project PI's
  - Future goal is to make Project Ground Data System/Science Data System completely PDS compliant
- Archiving with PDS is a requirement, not an option



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## Archiving Data with the Planetary Data System

### Considerations for Proposers (continued)



- PDS is evolving. Latest release (March 2004) includes improved interface and query capability (PDS-D D02) <http://pds.jpl.nasa.gov>
- Proposers Archive Guide (PAG) provided by the PDS to assist in archive costing and interfacing with the PDS
- Cost Model available for estimates (under Documents)
- Latest Standards and sample archive plans also available

